



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,393	11/26/2001	David M. Cournoyer	67008-025/S-5557	1778
26096	7590	11/04/2003	EXAMINER	
CARLSON, GASKEY & OLDS, P.C.			DEL SOLE, JOSEPH S	
400 WEST MAPLE ROAD			ART UNIT	
SUITE 350			PAPER NUMBER	
BIRMINGHAM, MI 48009			1722	

DATE MAILED: 11/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/995,393	COURNOYER ET AL.	
	Examiner	Art Unit	
	Joseph S. Del Sole	1722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 18-21, 27 and 28 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22 is/are allowed.
- 6) ☒ Claim(s) 1, 3-17, 24-26 and 29 is/are rejected.
- 7) ☒ Claim(s) 2 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of claims 1-17 in the Paper of 10/3/03 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claims 18-21 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected process, there being no allowable generic or linking claim. Election was made **without** indication of traverse in the Paper of 10/3/03.
3. Newly submitted claims 27 and 28 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the invention of claims 1-17, 23-26 and 29 and the invention of claims 27-28 are related as subcombination and combination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the semi-rigid mold member can mold with a non-metallic sieve or a screen of either 20 or 150 micron retention. The subcombination has separate utility such as a semi-rigid mold in a vacuum bag without protruding pins.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for

prosecution on the merits. Accordingly, claims 27 and 28 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

4. This application contains claims 19-21 and 27-28 drawn to inventions nonelected with traverse. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Drawings

5. The drawings were received on 9/11/03. These drawings are accepted.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1, 3, 6, 7, 10-14, 17 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palmer et al (4,942,013) in view of Dublinski et al (5,071,338) and Forster et al (5,897,739).

Palmer et al teach a semi-rigid mold member (Fig 10A) having a first ply having a release member (Fig 10A, #173 and col 12, lines 53-65); a second ply (Fig 10A, #181) adjacent the first ply; a sieve member (Fig 10A, #177) adjacent/ part of the first ply, and adjacent the second ply; a rigid mold member (Fig 10A, #179') matable with the semi-rigid mold member; the first ply located directly opposite the rigid mold member (when the molded materials are not present) with the release film facing the rigid mold member; and a third ply (Fig 10A, #199) adjacent the second ply and fourth ply (Fig 10A, #205) adjacent the third ply.

Palmer fails to teach the first ply having an elastomeric sheet rubber; the sieve member adjacent the elastomeric sheet rubber opposite the release film; the plys being a fluoroelastomer material, the first and second plys being unreinforced, the third and fourth plys including a fiber reinforced fluoroelastomer material; and the release film being an FEP layer adjacent the first ply and opposite the second ply.

Dublinski et al teach a mold for impregnation having first, second, third and fourth plies made of either a fiber reinforced or unreinforced fluoroelastomer sheet rubber material (Fig 3, #s 5-8, col 5, lines 11-43 and col 6, lines 29-43) for the purpose of providing stiffness and rigidity in detail areas while allowing flexibility and stretch (col 6, lines 3-6). Forster et al teach an FEP layer (Fig 3, #52) adjacent a first ply (Fig 3, #54) for the purpose of releasing a mold from a cured composite (col 7, lines 6-30 and col 5, lines 27-44).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Palmer et al with the second, third and fourth plies being made of a fiber reinforced fluoroelastomer sheet rubber material as taught by Dublinski et al and to have modified the first ply of release film of Palmer having a fiber unreinforced fluoroelastomer sheet rubber as taught by Dublinski et al because it provides a combination of stiffness/rigidity and flexibility and stretch and to have modified the first ply (having adjacent sieve) such that the release film is FEP release film as taught by Forster et al because FEP assists in the removing of a mold from cured composite.

10. Claims 1, 3, 6, 7, 10-14, 17 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Filsinger et al (DE10013409C1) in view of Dublinski et al (5,071,338) and Forster (5,897,739).

Filsinger et al teach a semi-rigid mold member (Fig 6) having a first ply (Fig 6, #13); a second ply (Fig 6, #7) adjacent the first ply; a sieve member (Fig 6, #15) adjacent/ part of the first ply and adjacent the second ply; a rigid mold member (Fig 6,

#3) matable with the semi-rigid mold member; the first ply located directly opposite the rigid mold member (when the molded materials are not present) and a third ply (Fig 6, #32) adjacent the second ply and a fourth ply (Fig 6, #19) adjacent the third ply.

Filsinger et al fail to teach the first ply having an elastomeric sheet rubber, the sieve member adjacent the elastomeric sheet rubber and opposite a release film that is an FEP layer opposite the second ply; the plys being a fluoroelastomer material, first and second plys being unreinforced and the third and fourth plys including a fiber reinforced fluoroelastomer material.

Dublinski et al teach a mold for impregnation having first, second, third and fourth plys made of a fiber reinforced or unreinforced fluoroelastomer sheet rubber material (Fig 3, #s 5-8, col 5, lines 11-43 and col 6, lines 29-43) for the purpose of providing stiffness and rigidity in detail areas while allowing flexibility and stretch (col 6, lines 3-6). Forster et al teach an FEP layer (Fig 3, #52) adjacent a first ply (Fig 3, #54) for the purpose of releasing a mold from a cured composite (col 7, lines 6-30 and col 5, lines 27-44).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Filsinger et al with the first, second, third and fourth plys being made of a fiber reinforced fluoroelastomer material as taught by Dublinski et al because it provides a combination of stiffness/rigidity and flexibility and stretch and to have modified the first ply such that a release film of FEP is on the side facing the molded material (and hence opposite the sieve and second ply)

as taught by Forster et al because FEP assists in the removing of a mold from cured composite.

11. Claims 4, 5 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palmer et al (4,942,013) in view of Dublinski et al (5, 071,338) and Forster (5,897,739) and further in view of Stofko (5,096,409).

Palmer et al, Dublinski et al and Forster teach the apparatus as discussed above.

Palmer et al fail to teach the sieve being made of stainless steel providing approximately 60 micron retention.

Stofko teaches a stainless steel sieve (Fig 2, #43) for the purpose of providing strength and prevent unnecessary elastic deformation (col 5, lines 31-47).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the sieve of Palmer et al with a stainless steel sieve as taught by Stofko because the stainless steel material provides structural stability.

12. Claims 4, 5 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Filsinger et al (DE10013409C1) in view of Dublinski et al (5, 071,338) and Forster (5,897,739) and further in view of Stofko (5,096,409).

Filsinger et al, Dublinski et al and Forster each teach the apparatus as discussed above.

Filsinger et al each fail to teach the sieve being made of stainless steel providing approximately 60 micron retention.

Stofko teaches a stainless steel sieve (Fig 2, #43) for the purpose of providing strength and prevent unnecessary elastic deformation (col 5, lines 31-47).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the sieve of Filsinger et al with a stainless steel sieve as taught by Stofko because the stainless steel material provides structural stability.

13. Claims 8-9 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palmer et al (4,942,013) in view of Dublinski et al (5,071,338) and Forster et al (5,897,739) in further in view of Dublinski et al (5,527,414).

Palmer et al, Dublinski et al ('338) and Forster et al teach the apparatus as discussed above.

Palmer et al fail to teach a rigid reinforcement insert between the third ply and the fourth ply, the reinforcement insert including a metallic sheet.

Dublinski et al ('414) teach a rigid metallic sheet reinforcement insert between plys (Fig 1, #22) for the purpose of facilitating pressure distribution during co-curing (col 6, lines 4-26).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Palmer et al with a rigid reinforcement sheet as taught by Dublinski et al ('414) because it assists in distributing pressure.

14. Claims 8-9 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Filsinger et al (DE10013409C1) in view of Dublinski et al (5,071,338) and Forster et al (5,897,739) and further in view of Dublinski et al (5,527,414).

Filsinger et al, Dublinski ('338) and Forster et al teach the apparatus as discussed above.

Filsinger et al fail to teach a rigid reinforcement insert between the third ply and the fourth ply, the reinforcement insert including a metallic sheet.

Dublinski et al ('414) teach a rigid metallic sheet reinforcement insert between plys (Fig 1, #22) for the purpose of facilitating pressure distribution during co-curing (col 6, lines 4-26).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Filsinger et al with a rigid reinforcement sheet as taught by Dublinski et al ('414) because it assists in distributing pressure.

Allowable Subject Matter

15. Claim 22 is allowed.

16. Claims 2 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

17. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record, while teaching a sieve member, fails to teach the sieve member embedded in the first ply.

Response to Arguments

18. Applicant's arguments filed 10/3/03 have been fully considered but they are not persuasive.

The Applicant argues that the rejections as anticipated by Hooper have been overcome.

The Examiner agrees and all rejections to Hooper have been withdrawn.

The Applicant argues that none of the references disclose a first ply having a sieve member adjacent an elastomeric sheet opposite a release film because the wire screens provide flow.

The Examiner disagrees. Palmer shows that a wire screen for flow does not preclude a release film between the wire screen and the material being molded (#173 has release capabilities and is between the molded material and the screen #177). Therefore the combinations above that teach layers of release film below rubber sheet below sieve are valid and the claims above remain rejected. Release film may provide resin flow as discussed above as taught by Palmer.

Conclusion

19. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Correspondence


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph S. Del Sole whose telephone number is (703) 308-6295. The examiner can normally be reached on Monday through Friday from 8:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Wanda Walker, can be reached at (703) 308-0457. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306 for both non-after finals and for after finals.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Joseph S Del Sole

J.S.D.
October 23, 2003


ROBERT DAVIS
PRIMARY EXAMINER
GROUP 1800 / 703
10/30/03